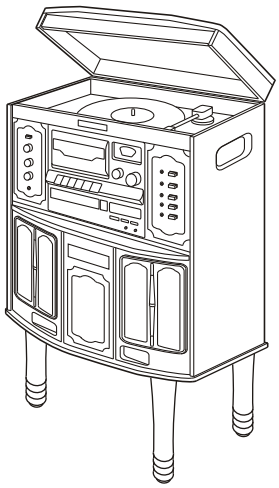

TEAC

SERVICE MANUAL

GF-480

Compact Hi-Fi Stereo System

For U.S.A and general export version

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

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1 SAFETY INFORMATION 2
2 SPECIFICATIONS 3
3 ADJUSTMENT AND CHECKS 4
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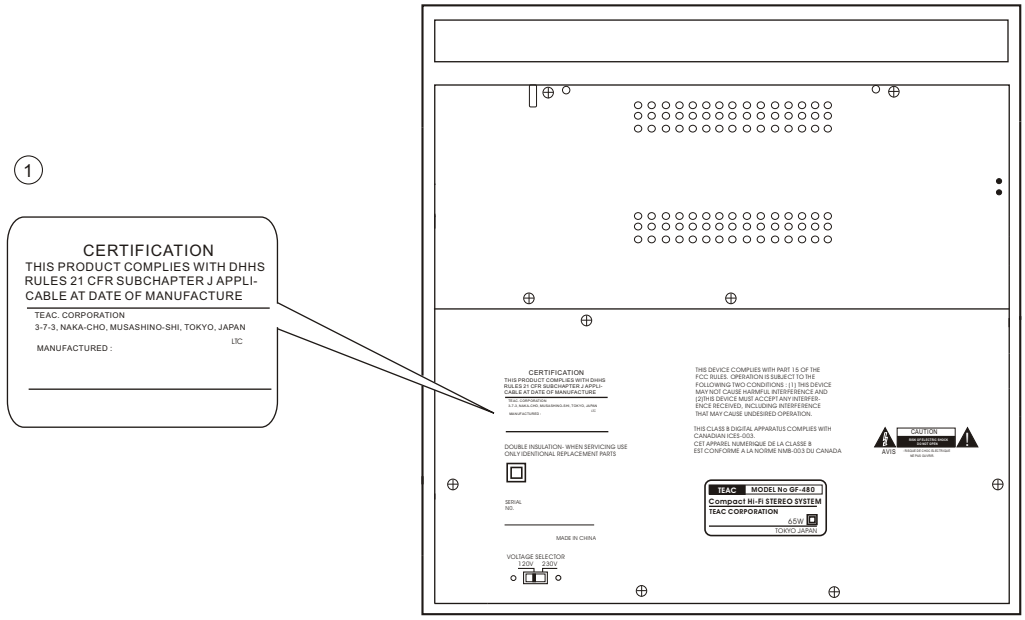
1 SAFETY INFORMATION

SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1,subchapter J,based on the Radiation Control for Health and Safety Act of 1968" and is classified as class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings. The label required in this regulation is shown ①.

• CAUTION

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.


①
CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLI-CABLE AT DATE OF MANUFACTURE
TEAC. CORPORATION
3-7-3, NAKA-CHO, MUSASHINO-SHI, TOKYO, JAPAN
MANUFACTURED :
LTC
CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLI-CABLE AT DATE OF MANUFACTURE
DOUBLE INSULATION- WHEN SERVICING USE ONLY IDENTIONAL REPLACEMENT PARTS
SERIAL NO.
MADE IN CHINA
VOLTAGE SELECTOR
120V 230V
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS : (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2)THIS DEVICE MUST ACCEPT ANY INTERFER-ENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
CET APPAREL NUMERIQUE DE LA CLASSE B EST CONFORME A LA NORME NMB-003 DU CANADA
CAUTION
AVIS
TEAC MODEL No GF-480
Compact Hi-Fi STEREO SYSTEM
TEAC CORPORATION
65W
TOKYO JAPAN

Optical pickup:	
Type	:SOH-AA-8E15
Manufacturer	:SONY CORPORATION
Laser output	: Less than 0.35mW on the objective lens
Wavelength	: 79 0 +/-25nm

2 SPECIFICATIONS

AMPLIFIER Section

Output Power: 10W+10W (U.S.A/Canada)
Frequency Response: 60 to 30,000Hz

TUNER Section

FM Section

Frequency Range: 88.0 to 108.00MHz
Sensitivity (S/N 30dB): 18 dB uV

AM Section

Frequency Range: 530 to 1710KHz (U.S.A/Canada)
Sensitivity (S/N 20dB): 55 dBuV/m
Signal-to-Noise Ratio: 55dB

CD PLAYER Section

Frequency Response: 40 to 16,000Hz +/-5dB
Signal-to-Noise Ratio: 75dB (IEC-A)
Wow and Flutter: Unmeasurable
Channel Separation: 40dB

CASSETTE DECK Section

Track System: 4 track, 2 channel stereo
Tape Speed: 4.8cm/sec
Wow and Flutter: 0.15% (WRMS)
Frequency Response: 125 to 6,300Hz +/-2dB
Signal-to-Noise Ratio: 45dB

SPEAKER SYSTEM Section

Type: 1-way
Impedance: 8-ohms

GENERAL

Power Requirements: 120V ~, 60Hz (U.S.A/Canada)
120V/230V ~, 50-60Hz (General Export Version only)

Power Consumption: 65W
Dimension (W x H x D):
Main Unit: 386 x 356 x 815 mm
(15-3/16 x 14 x 32-1/12)inches

Weight: 16.5 kg

Standard Accessories: Owner's Manual x 1
Warranty Card x 1
45rpm Adaptor
Rubber pad x 4

- Improvements may result in specification or feature changes without notice.

3 ADJUSTMENTS AND CHECKS

3-1 TUNER SECTION

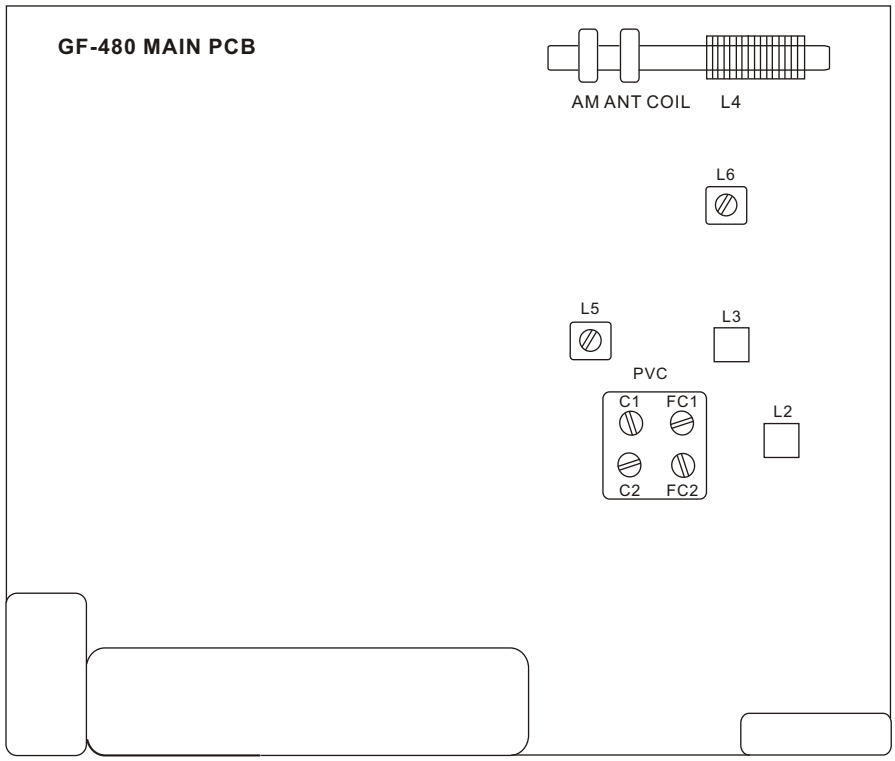
- Use a screwdriver with a plastic or ceramic grip for all adjustment.

3-1-1 FM adjustment

1. Set the function switch to the FM position.
2. Connect the signal generator output through a 75 ohm dummy antenna to "ANT" on MAIN PCB.
3. Connect the oscilloscope to the speaker terminal.
4. Set the signal generator as listed in the alignment chart.

3-1-2 AM adjustment

1. Set the function switch to the AM position.
2. Connect the test loop antenna across the output of the signal generator.
3. Connect the oscilloscope to the speaker terminal.
4. Set the signal generator as listed in the alignment chart.



3-1-3 FM/AM alignment chart

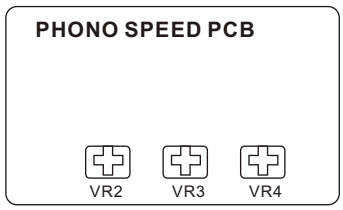
ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT POINT	ADJUSTMENT
FM				
1. FM band	87.5MHz 1kHz, +/-22.5kHz dev.	87.5MHz	L3	Adjust for max.output.
	108MHz 1kHz, +/-22.5kHz dev.	108MHz	PVC FC1	
2. Tracking	90MHz 1kHz, +/-22.5kHz dev.	90MHz	L2	Adjust for max. output and best waveform.
	104MHz 1kHz, +/-22.5kHz dev.	104MHz	PVC FC2	
	Repeat step 2			
AM				
1. IF adjustment	455kHz 1kHz, 30% mod	600kHz	L6	Adjust for max.output.
2. AM band	530kHz 1kHz, 30% mod	530kHz	L5	Adjust for max. output.
	1710kHz 1kHz, 30% mod	1710kHz	PVC C1	
3. Tracking	600kHz 1kHz, 30% mod	600kHz	L4 AM ANT	Adjust for max. output and best waveform.
	1400kHz 1kHz, 30% mod	1400kHz	PVC C2	
	Repeat step 3			

3-1-4 TURNTABLE alignment chart

ITEM	HP - 4005 Number :	ADJUSTMENT POINT	SPEED	ADJUSTMENT	WOW & Flutter
TURNTABLE					
33	NO.3	VR2	3000Hz	+/- 30Hz	<0.35%
45	NO.4	VR3	3000Hz	+/- 30Hz	-----
78	NO.4	VR4	5200MHz	+/- 30Hz	-----

3-2 TURNTABLE SECTION

1. Set function switch to the PHONO position.
2. Connect the oscilloscope to the speaker terminal.
3. Use a HP-4005 record for all adjustment.



3-3 CASSETTE DECK SECTION

3-3-1 Tape speed adjustment

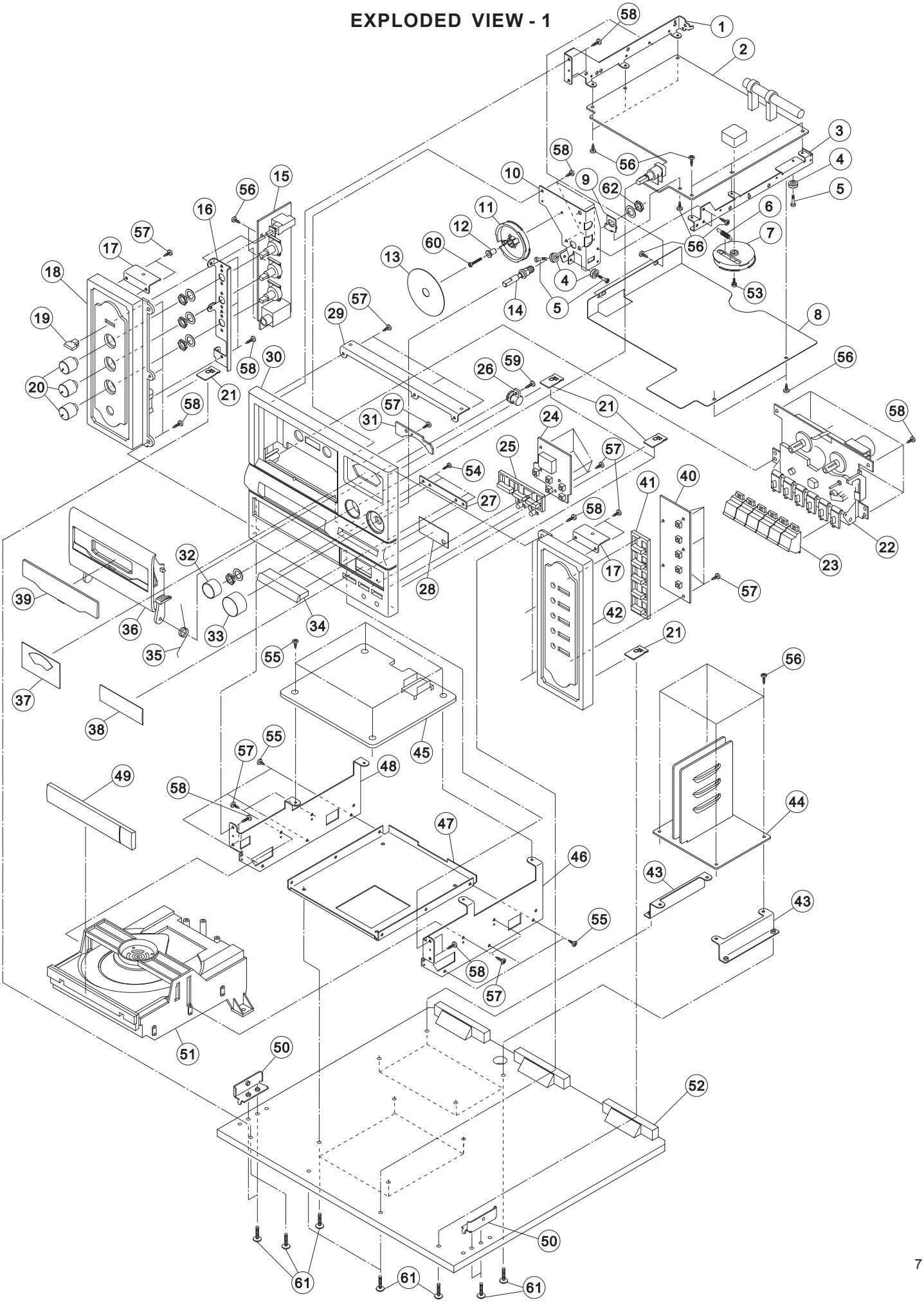
1. Place the function switch in the TAPE position.
2. Connect the frequency counter to the speaker terminal.
3. Load tape decks with MTT-111N (use the midpoint of side A).
4. Press the PLAY button on tape and adjust MOTOR VR to obtain 3,000Hz +/- 30Hz.
5. Stop tape .

3-3-2 Azimuth adjustment

1. Connect the oscilloscope to the speaker terminal.
2. Load a MTT-114N test tape and press the PLAY button.
3. Adjust the azimuth using a screwdriver to maintain the max.
   L & R out voltage.
4. Secure the azimuth position using locking paint.

4 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW - 1

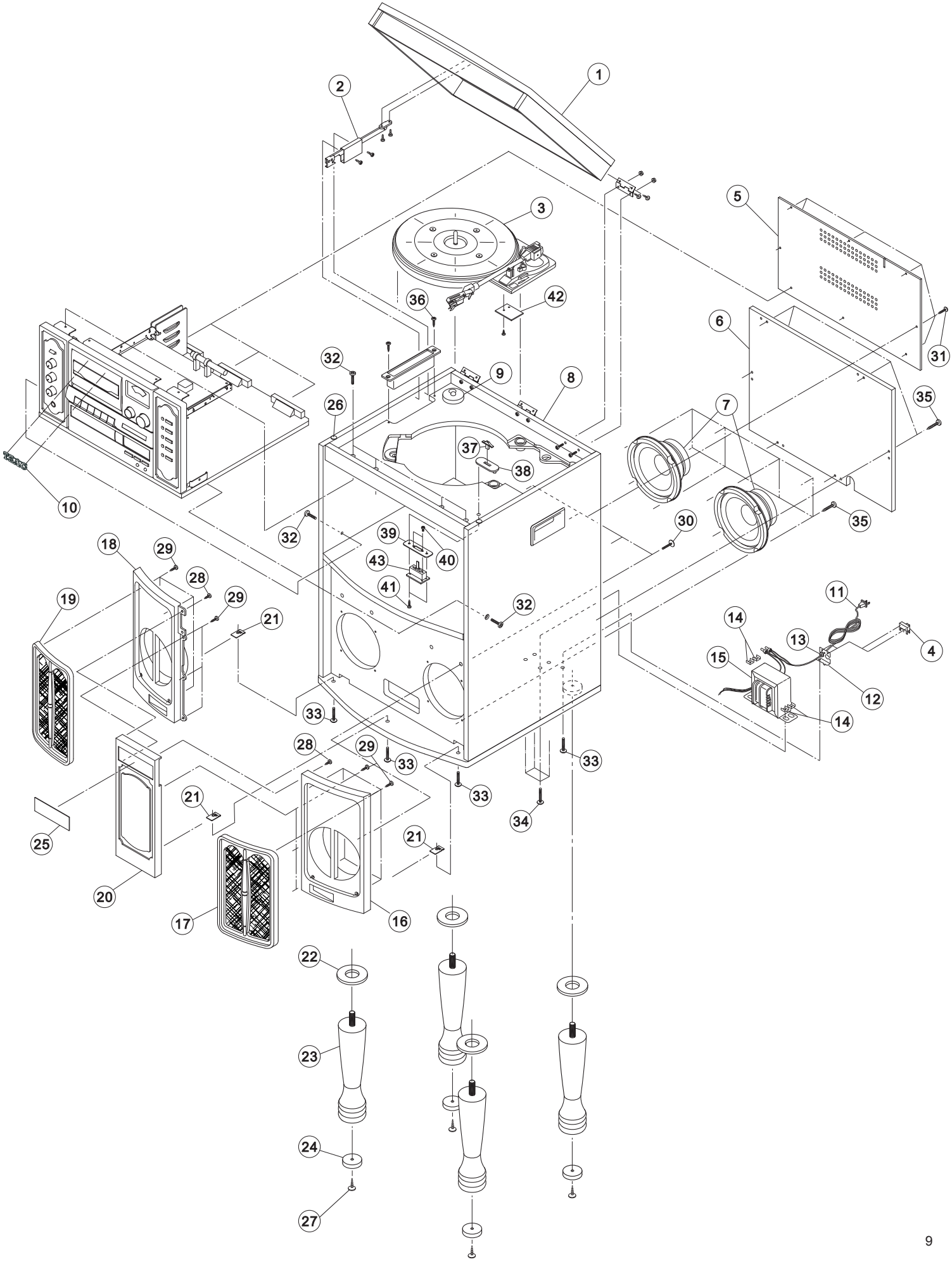


GF-480

EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION
1-1	011-02000200	MAIN PCB BKT - L
1-2	100-GF602000	MAIN PCB ASS'Y
1-3	011-02000100	MAIN PCB BKT - R
1-4	008-0GP18001	DIAL PULLEY
1-5	025-00018002	FIXING SCREW 3X9MM ZMC HD
1-6	031-02000010	DIAL DRUM SPRING
1-7	010-02000200	DIAL DRUM (A)
1-8	020-02000200	CD PCB SHIELD PLATE
1-9	011-02000000	MAIN PCB SUB BKT
1-10	011-02000600	TUNING DRUM BKT
1-11	010-02000300	DIAL DRUM - (B)
1-12	017-02000000	DIAL SHAFT
1-13	015-F3000200	DIAL SCALE
1-14	014-GF200000	TUNING SHAFT
1-15	100-GF602020	EQ PCB ASS'Y
1-16	011-GF600300	VR BKT
1-17	011-GF600100	FUNCTION PANEL BKT
1-18	001-GF600100	EQ FUNCTION PANEL
1-19	004-GF600600	PUSH KNOB
1-20	004-GF600500	TONE KNOB
1-21	011-GP180300	NUT PLATE
1-22	038-102GF600	CASSETTE MECH
1-23	004-F3000600	CASSETTE KEY
1-24	100-GF602050	CD CONTROL PCB ASS'Y
1-25	004-F3000200	CD CONTROL KNOB
1-26	008-0GP18000	GEAR DUMPER ASS'Y
1-27	011-02001400	MASKING F.PANEL SW HOLDER
1-28	015-F3000300	CD LED WINDOW
1-29	011-02001300	FRONT PANEL BKT
1-30	001-GF600000	FRONT PANEL
1-31	100-GF602030	POWER & FM ST LED PCB ASS'Y
1-32	004-F3000100	VOLUME KNOB
1-33	004-F3000000	TUNING KNOB
1-34	004-F3000500	MASKING F.PANEL SWITCH
1-35	031-02000110	CASSETTE OPEN SPRING
1-36	005-F3000000	CASSETTE CASE
1-37	015-F3000100	DIAL WINDOW
1-38	015-02000000	CD LENS PLATE
1-39	007-F3000000	CASSETTE WINDOW
1-40	100-GF602040	FUNCTION KEY PCB ASS'Y
1-41	004-GF600400	FUNCTION CONTROL KNOB
1-42	001-GF600200	FUNCTION PANEL
1-43	011-GF600000	AMP PCB BKT
1-44	100-GF602010	POWER AMP PCB ASS'Y
1-45	100-98ES3090	LT-98ES CD PCB ASS'Y
1-46	011-02001800	CD DECK BKT - R
1-47	011-02001600	CD DECK BKT - BOTTOM
1-48	011-GF600400	CD DECK BKT - L
1-49	006-F3000000	CD DOOR
1-50	011-GF600200	CHASSIS PLATE BKT
1-51	039-98ES0130	CD DECK & PCB ASS'Y
1-52	016-GF600100	CENTER BOARD
1-53	022-82608032	SCREW W/SP2.6X8MM PM ZMC
1-54	021-12608032	SCREW 2.6X8MM PT ZMC HD
1-55	026-23006022	SCREW 3X6MM BTT ZMC HD
1-56	024-23008032	SCREW 3X8MM BA ZMC HD
1-57	021-23008032	SCREW 3X8MM BT ZMC HD
1-58	021-23010032	SCREW 3X10MM BT ZMC HD
1-59	024-23010032	SCREW 3X10MM BA ZMC HD
1-60	022-13014032	SCREW 3X14MM PM ZMC HD
1-61	026-44014022	SCREW 4X14MM PWTT ZMC HD
1-62	013-90000001	HEXAGON NUT

EXPLODED VIEW - 2



EXPLODED VIEW-2

REF. NO		PARTS NO.	DESCRIPTION	REMARKS
2-1		010-GF600100	STAY COVER	
2-2		011-F1800500	SLIDE STAY ASS'Y	
2-3		040-01000310	PLAYER ASSY 3 SPEED (DC:9V)	
2-4	⚠	063-GF200110	AC POWER SLIDE SWITCH (UNI)	
2-5		016-GF600200	BACK BOARD - UPPER	
2-6		016-GF600300	BACK BOARD - LOWER (UL/CSA)	
		016-GF600301	BACK BOARD - LOWER (UNI)	
2-7		061-GF600800	SPEAKER 8 OHM	
2-8		016-GF600000	WOODEN CABINET ASS'Y	
2-9		010-10000700	45 RPM ADAPTOR	
2-10		010-GF600000	BADGE	
2-11		087-00000007	AC CORD UL	
2-12		011-02001500	AC CORD HOLDER	
2-13		030-00000002	AC CORD BUSH	
2-14		011-21500100	POWER TRANSFORMER PLATE	
2-15	⚠	084-GF600200	POWER TRANSFORMER 120V/60Hz (UL/CSA)	
	⚠	084-GF600201	POWER TRANSFORMER 120V/230V 50Hz (UNI)	
2-16		009-F3000100	SPEAKER GRILL BASE - R	
2-17		001-F3000400	SPEAKER GRILL ASSY - R	
2-18		009-GF600000	SPEAKER GRILL BASE - L	
2-19		001-F3000300	SPEAKER GRILL ASSY - L	
2-20		001-GF600300	SPEAKER CENTER PANEL	
2-21		011-GP180300	NUT PLATE	
2-22		037-F4800100	RUBBER MAT - COFFEE	
2-23		016-GF600400	WOODEN CABINET LEG	
2-24		037-F4800000	RUBBER FOOT - BLACK	
2-25		015-GF600300	NAME PVC SHEET	
2-26		037-GF600000	TOP COVER CUSHION	
2-27		024-44016033	SCREW 4X16MM PWA BLK HD	
2-28		021-23008032	SCREW 3X8MM BT ZMC HD	
2-29		021-23010032	SCREW 3X10MM BT ZMC HD	
2-30		021-43016032	SCREW 3X16MM PWT ZMC HD	
2-31		024-43112032	SCREW 3.1X12MM PWA ZMC HD	
2-32		026-24014023	SCREW 4X14MM BTT BLK HD	
2-33		026-44018022	SCREW 4X18MM PWTT ZMC HD	
2-34		026-44020022	SCREW 4X20MM PWTT ZMC HD	
2-35		024-24020032	SCREW 4X20MM BA ZMC HD	
2-36		024-23006033	SCREW 3X6MM BA BLK HD	
2-37		004-M9700000	SPEED SW KNOB	
2-38		010-M9700000	SPEED SW COVER	
2-39		011-F1001040	SPEED SW BKT	
2-40		022-12604032	SCREW 2.6X4MM PM ZMC	
2-41		021-13010032	SCREW 3X10MM PT ZMC	
2-42		100-M9903080	PHONO SPEED PCB ASS'Y	
2-43		100-M9903090	PHONO SPEED SW PCB ASS'Y	

5 PC BOARDS AND PARTS LIST

MAIN PCB ASS'Y

REF. NO		PARTS NO.	DESCRIPTION
		100-GF602000	MAIN PCB ASS'Y
		062-GF600000	MAIN PCB
		018-05030000	HEAT SINK(FOR KA7809)
		018-0GF60010	HEAT SINK(FOR POWER IC)
		011-86990000	FUSE HOLDER
		056-10080001	FERRITE BAR 10X80MM
		053-F300N000	TUNER PVC
C88	⚠	072-30220251	CE, 25V 2200UF
CF1		081-04550000	AM CERAMIC FILTER SFU455B
CF2,4		081-31070001	FM CERAMIC FILTER L10.7MA5-A
CF3		093-11070001	CERAMIC FILTER CDA10.7MG77-A
CN7		082-10500100	CONNECTOR 5PIN P=2MM
CN8		082-10510100	CONNECTOR 5PIN P=2.5MM
CN5,9		082-10310100	CONNECTOR 3PIN P=2.5MM
CN201		082-10700100	CONNECTOR 7PIN P=2MM
CN501		082-10300100	CONNECTOR 3PIN P=2MM
D1-16,26-29		077-00414801	DIODE IN4148
D22-D25	⚠	077-10400201	DIODE IN4002
FUSE2	⚠	090-12520022	FUSE T2AL/250V
IC1		075-00211101	TA2111N
IC2		075-00023300	PT233T
IC3		075-00731609	AN7316
IC5		075-00780901	AN7809
L1		078-08450351	FM BPF COIL 0.8MMX4.5X3.5T
L2,3		078-08550251	FM RF/OSC COIL 0.8MMX5.5X2.5T
L4		096-GF180010	AM ANT COIL 102:10T
L5		079-GF100210	AM OSC COIL (RED)
L6		079-GF100010	AM IFT COIL (BLACK)
L7		095-00100001	INDUCTOR 10UH 0.5W
L8		078-05301952	FILTER COIL 0.5MMX3X19.5T
L9		079-SW100630	TAPE OSC COIL
Q1,2,4,7-10,12, Q15,18,19,21,22, Q24,25,27-36		076-00C94500	TR-2SC945
Q3,23,37		076-00A73300	TR-2SA733
Q11,20		076-00B54400	TR-2SB544F
Q17		076-00D88200	TR-2SD882
Q26		076-0C200100	TR-2SC2001L
VR1		069-F1002000	VR.50KBX2 W/SW
ZD1		077-30003601	ZENER DIODE GZA3V6
ZD2		077-30005601	ZENER DIODE GZA5V6
ZD3		077-30012001	ZENER DIODE GZA11Y

FUNCTION KEY PCB ASS'Y

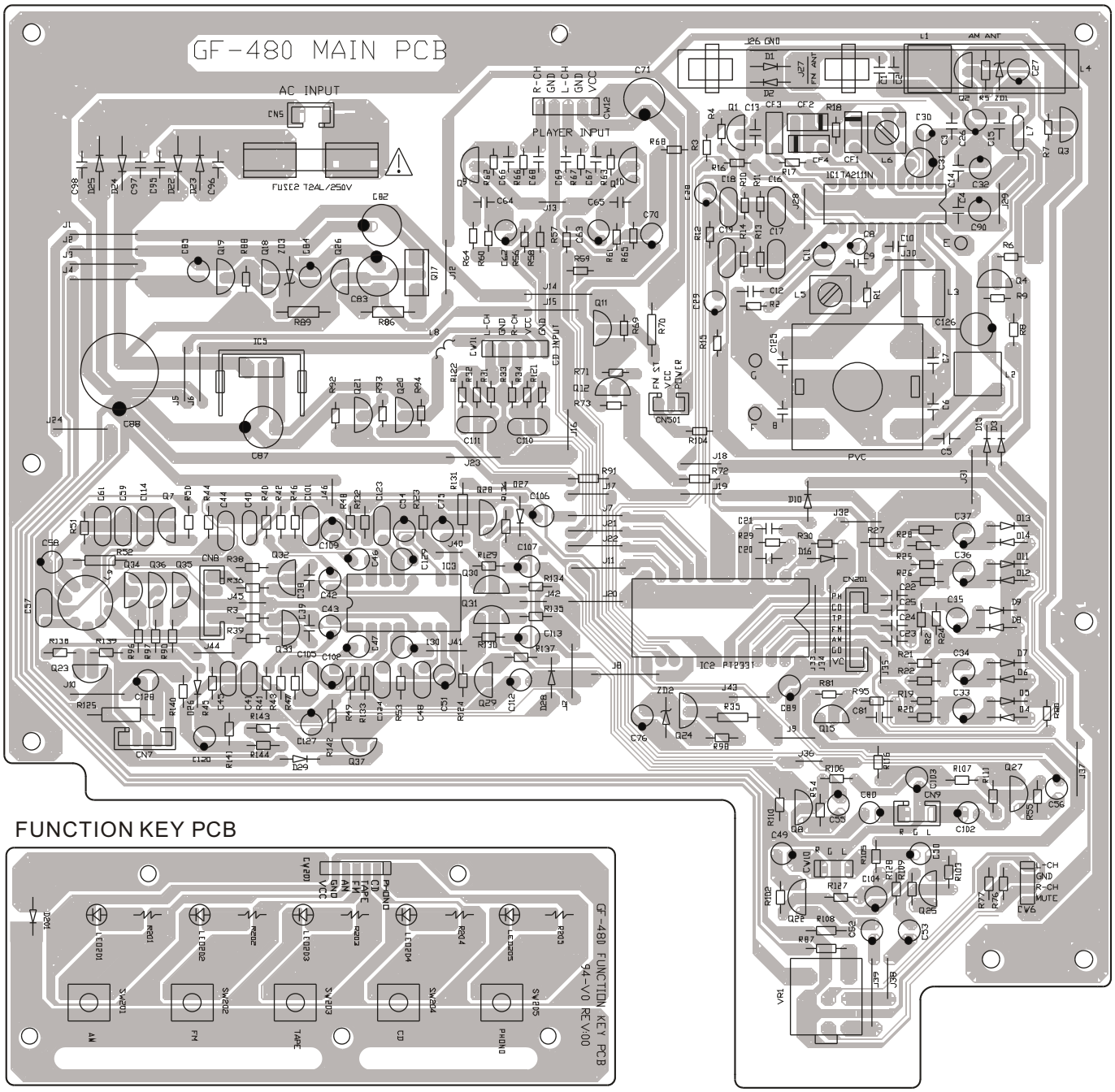
REF. NO	PARTS NO.	DESCRIPTION
	100-GF602040	FUNCTION KEY PCB ASS'Y
		FUNCTION KEY PCB
D201	077-00414801	DIODE 1N4148
LED201-205	094-02020201	LED(RED) 3MM
SW201-205	063-8699T000	TACT SWITCH H=4.3MM

POWER & FM ST LED PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-GF602030	POWER & FM ST LED PCB ASS'Y
		POWER & FM ST LED PCB
LED501,502	094-02060201	LED(RED) 2MM

GF-480

MAIN PCB



FUNCTION KEY PCB

POWER & FM ST LED PCB

CD MAIN PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-98ES3090	CD MAIN PCB ASS'Y
	062-LT98ES01	CD MAIN PCB
	018-0LT98000	HEAT SINK
CN1	082-11100100	CONNECTOR BASE 11PIN
CN2	082-10300100	CONNECTOR BASE 3PIN
CN4,5	082-10500100	CONNECTOR BASE 5PIN
CN6	082-10600100	CONNECTOR BASE 6PIN
CN7	082-21600305	CONNECTOR 16PIN
D1	077-30006201	DIODE ZENER GZA6.2Y
D2	077-00414801	DIODE 1N4148
IC1	075-00945731	TC9457F-010
IC2	075-00210921	TA2109F
IC3	075-00209201	TA2092N
IC4	075-00729111	TA7291S
L1,2	077-30003101	COIL CHOKE AXIAL 10UH
Q1,2,4	076-09014C00	TR-9014C
Q3,6	076-09015B00	TR-9015B
Q5	076-00901300	TR-9013G
X1	093-11693440	CRYSTAL 16.9344MHZ

POWER AMP PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-GF602010	POWER AMP PCB ASS'Y
		POWER PCB
C77,78	072-30100161	CE, 16V 1000UF
C86	072-30330501	CE, 50V 3300UF
CN1	082-10300100	CONNECTOR 3PIN P=2MM
CN2,4	082-10310100	CONNECTOR 3PIN P=2.5MM
CN3	082-10510100	CONNECTOR 5PIN P=2.5MM
CN6	082-10400100	CONNECTOR 4PIN P=2MM
D18-21	077-10539201	DIODE IN5392
FUSE1	090-12531522	FUSE 3.15A/250V
IC4	075-00428212	LA4282
Q13,14	076-00C94500	TR-2SC945

EQ PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-GF602020	EQ PCB ASS'Y
		EQ PCB
JK401	064-64020103	PHONE JACK D-6.4MM
SW401	063-0GP60210	PUSH SWITCH
VR002,003	069-05552001	ROTARY VR.A100KX2
VR004	069-30011000	ROTARY VR. 100KB+C
CN10	082-10310100	CONNECTOR 3PIN P=2.5MM

CD CONTROL PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-GF602050	CD CONTROL PCB ASS'Y
		CD CONTROL PCB
LED301	094-02080202	CD LED DISPLAY
LED302	094-02060201	LED(RED) 2MM
SW301-305	063-0GP28020	TACT SWITCH H=5MM

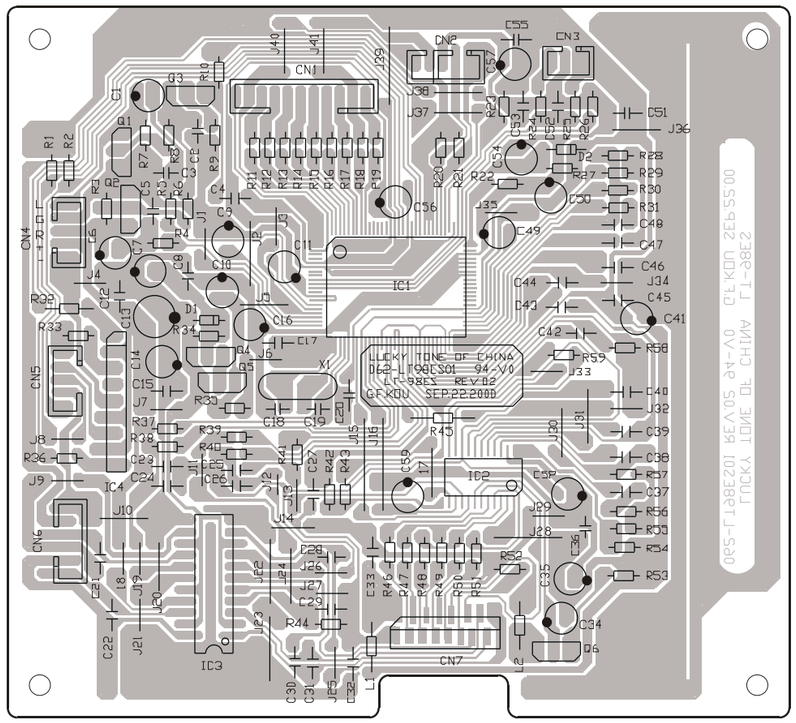
PHONO SPEED PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-M9903080	PHONO SPEED PCB ASS'Y
	062-0M990000	PHONO SPEED PCB
CN501	082-10440100	CONNECTOR BASE 4PIN P=2.5MM
CN502	082-10510100	CONNECTOR BASE 5PIN P=2.5MM
VR2,3,4	092-30100000	SFR 1KB RH0612C 13J

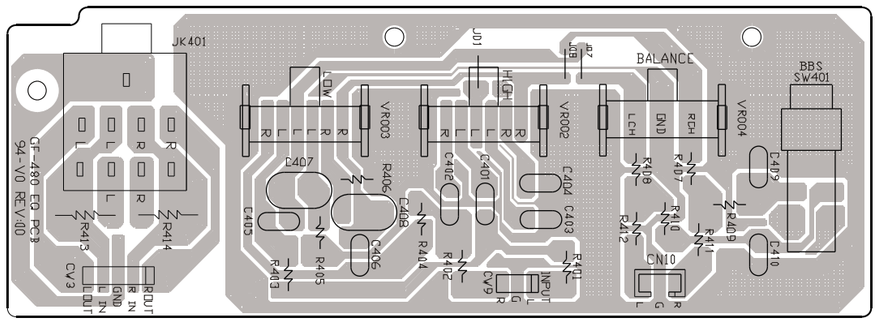
PHONO SPEED SW PCB ASS'Y

REF. NO	PARTS NO.	DESCRIPTION
	100-M9903090	PHONO SPEED SW PCB ASS'Y
		PHONO SPEED PCB
SW01	063-GF100110	PHONO SPEED SW 2P3T

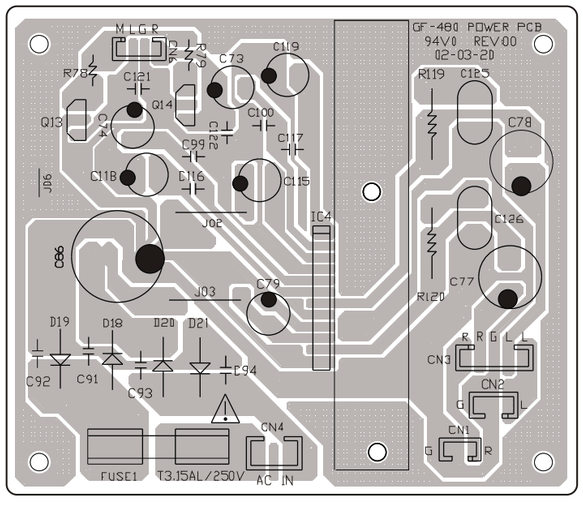
CD MAIN PCB



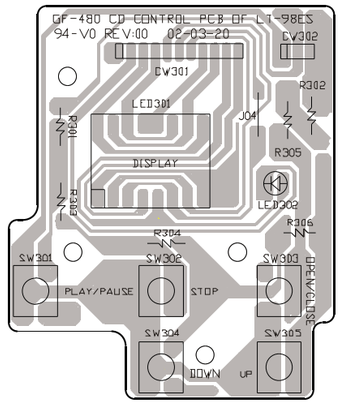
EQ PCB



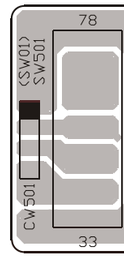
POWER AMP PCB



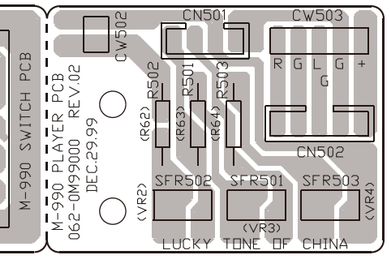
CONTROL PCB



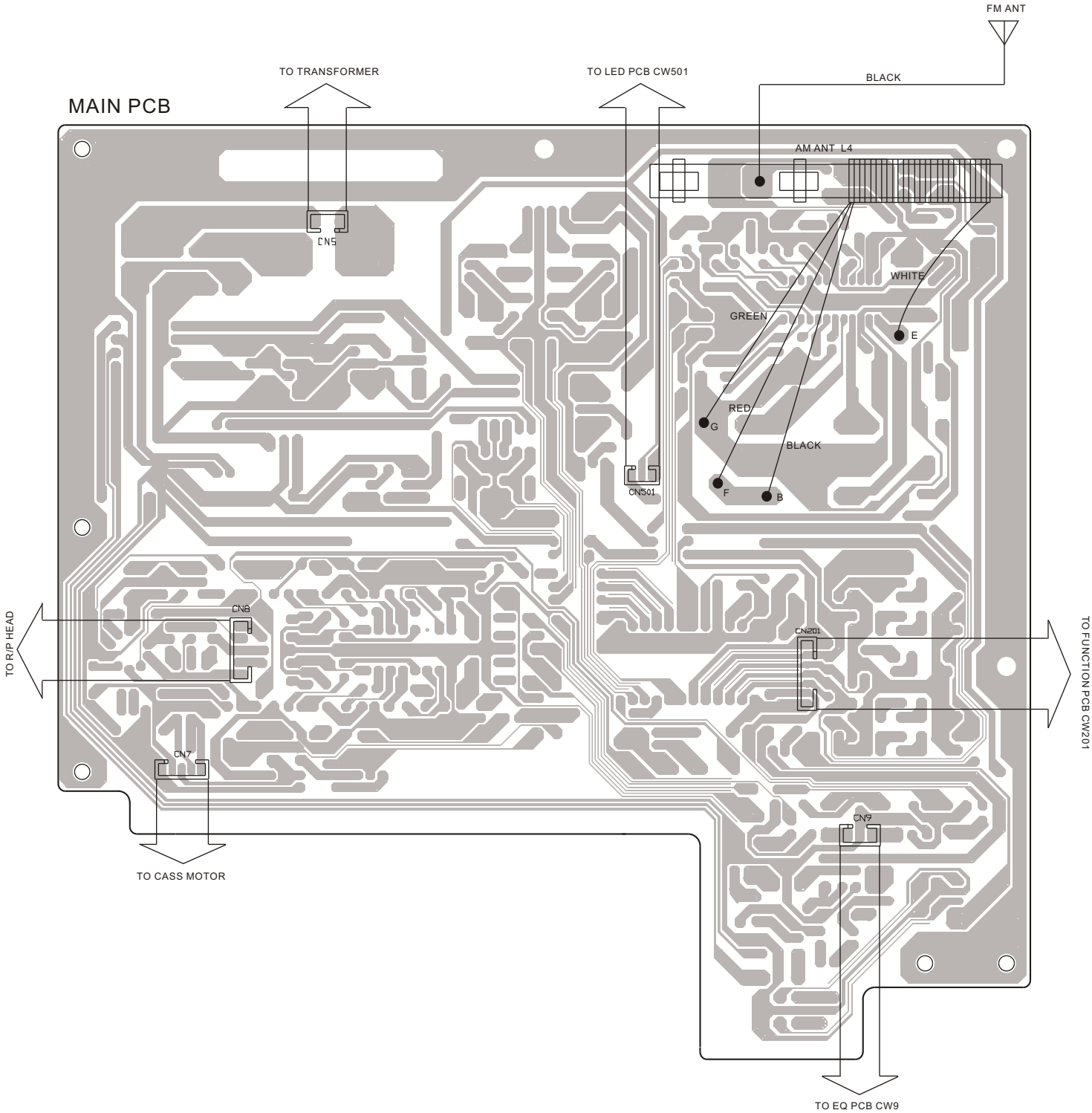
PHONO SPEED SW PCB



PHONO SPEED PCB



6 WIRING DIAGRAM



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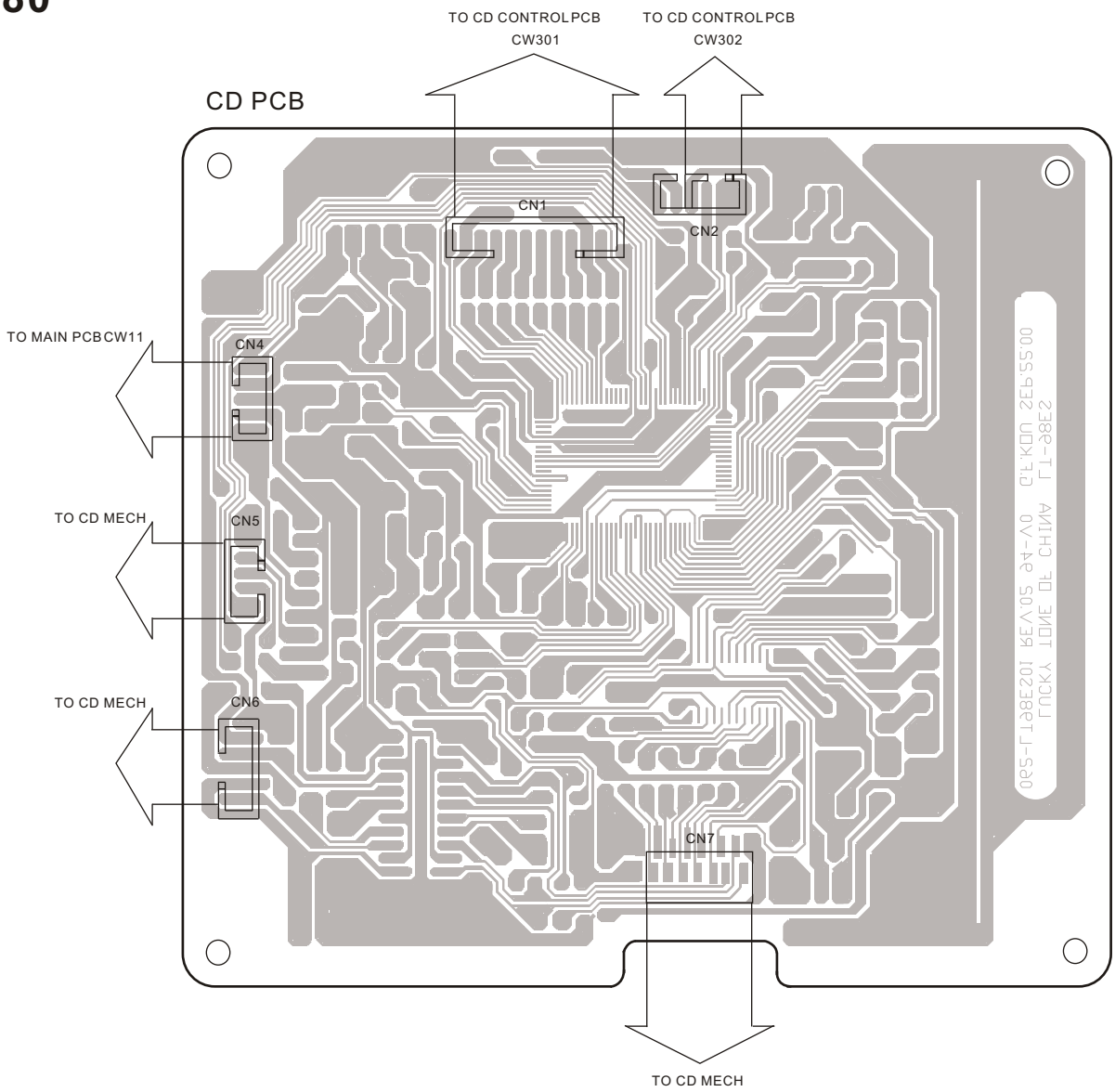
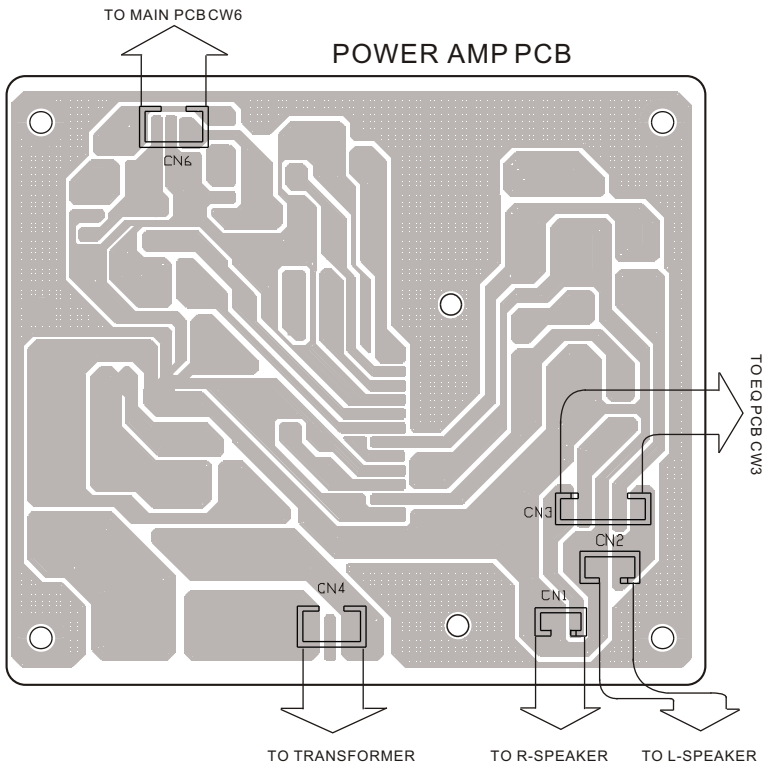

TO CD CONTROL PCB
CW301
TO CD CONTROL PCB
CW302
CD PCB
CN1
CN2
TO MAIN PCB CW11
CN4
TO CD MECH
CN5
TO CD MECH
CN6
CN7
TO CD MECH


TO MAIN PCB CW6
POWER AMP PCB
CN6
TO EQ PCB CW3
CN3
CN2
CN4
CN1
TO TRANSFORMER
TO R-SPEAKER
TO L-SPEAKER

7 INCLUDED ACCESSORIES

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	046-GF600000	INSTRUCTION BOOK -ENG/FRENCH (UL/CSA)	
	046-GF600001	INSTRUCTION BOOK -SPAISH/PORTUGUESE (UNI)	
	047-D2831000	GUARRANTY SHEET	
	010-10000700	45 RPM ADAPTOR	
	037-F4800100	RUBBER MAT	

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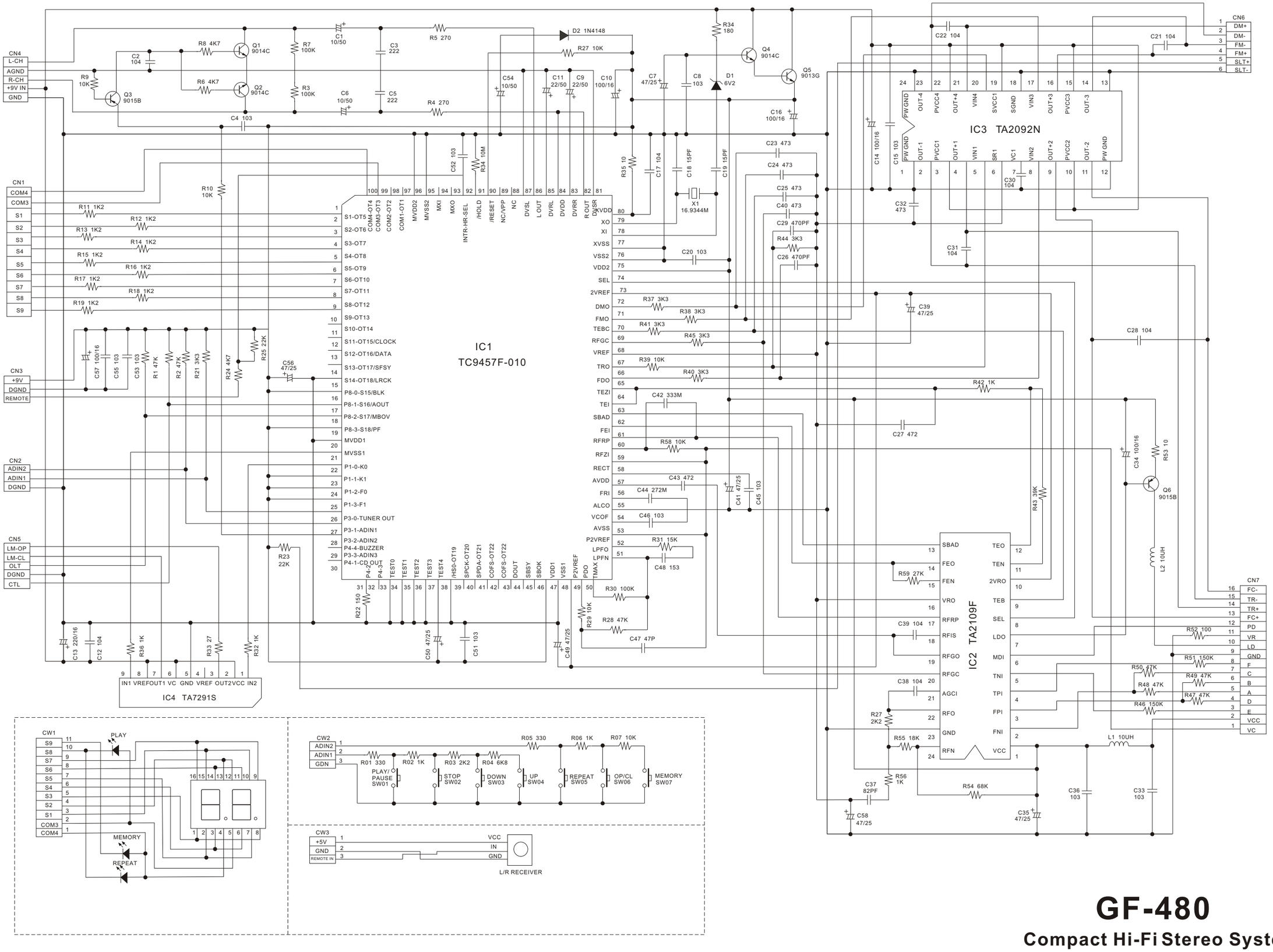
TEAC

TEAC CORPORATION	3-7-3 Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone:(0422)52-5081
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323)726-0303
TEAC CANADA LTD.	5939 Wallace Street, Mississauga, Ontario L4Z 1Z8, Canada Phone: (905)-890-8008
TEAC MEXICO, S.A.De C.V.	Campesinos 184, Col. Granjas Esmeraida, 09810, Mexico Phone: (525)-581-5500
TEAC UK LIMITED	5 Marlin House, Croxley Business Park, Watford, Hertfordshire, WD188TE, U.K. Phone: 01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wlesbaden-Erbenheim, Germany Phone:0611-71580
TEAC FRANCE S.A.	17, Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone:(1)42.37.01.02
TEAC NEDERLAND BV	Oeverkruid 15, NL-4941 W Raamsdonksveer, Nederland Phone:0162-510210
TEAC BELGIUM NV/SA.	c/o TEAC NEDERLAND BV, Oeverkruid 15, NL-4941 W Raamsdonksveer, Nederland Phone:+31-162-510860
TEAC ITALIANA S.p.A.	Via C, Cantu 11, 20092 Cinisello Balsamo, Milano, Italy Phone:02-66010550
TEAC AUSTRALIA PTY., LTD. A.B.N. 80 005 408 462	280 William Street, Melbourne, VIC 3000, Australia Phone:(03)9672-2400

PREPARED IN HONG KONG

CD MAIN PCB



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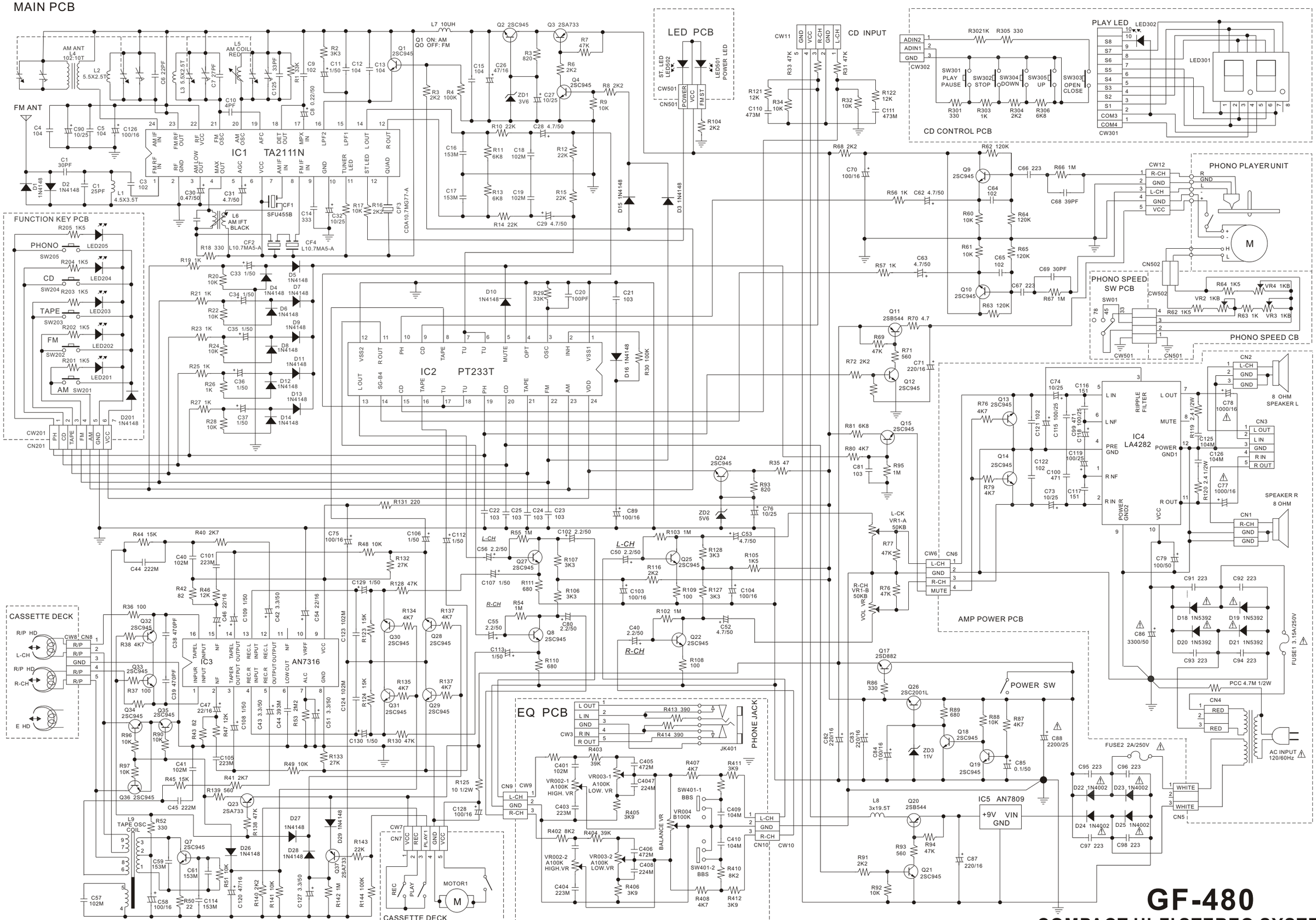
Compact Hi-Fi Stereo System

MAIN PCB



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COMPACT HI-FI STEREO SYSTEM